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10/608,768	06/27/2003	Alexandru Gavrilescu	30835/305573	8097

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EXAMINER
JOHNSON, CARLTON

ART UNIT	PAPER NUMBER
2136	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/06/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

	Application No.	Applicant(s)
Office Action Summary	10/608,768	GAVRILESCU ET AL.
	Examiner	Art Unit
	Carlton V. Johnson	2136

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>*19 January 2007*</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *20-26,28-40 and 42-47* is/are pending in the application.

   4a) Of the above claim(s) *1-19,27 and 41* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *20-26,28-40 and 42-47* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

     1.☐ Certified copies of the priority documents have been received.

     2.☐ Certified copies of the priority documents have been received in Application No. _____.

     3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   This action is responding to application papers filed on **1-19-2007**.

2.   Claims **20 - 26, 28 - 40, 42 - 47** are pending.   Claims **20, 25, 26, 28, 34, 39, 40**

have been amended.   Claims **1 - 19, 27, 41** have been cancelled.   Claims **20, 22, 26,**

29, 32, 34, 36, 40, 43, 46 are independent.

Response to Remarks

3.   The following is in response to applicant's remarks dated January 19, 2007.

3.1   Applicant argues, " ... *requesting by the second member authorization* ... ". *(see*

Remarks Pages 9, 10 and amended claims)

This is an added limitation and will be addressed when the claims are addressed.

3.2   Applicant argues, " ... *including the published token to each member of the*

secure group ... ". *(see Remarks Page 9 and amended claims)*

This is an added limitation and will be addressed when the claims are addressed.

3.3   Applicant argues, " ... *publish* ... ". *(see Remarks Page 10)*

The Yeager prior art disclose the capability to publish information (i.e. including a

certificate), and the capability for peers to have persistent storage (i.e. database) for

access to the published security information (i.e. certificate). (see Yeager paragraph [0256], lines 1-10)

3.4   Applicant argues, " ... a revocation bitmap ... ". (see Remarks Page 11)

The Yeager and Aguilera prior art combination discloses a bitmap to be utilized as bits of revocation data. This is equivalent to applicant's invention whereby the manipulation of a bitmap to indication revocation information. (see Aguilera paragraph [0031], lines 1-5: bitmap representation for revocation list; paragraph [0027], lines 17-20: update revocation list, in order to revoke an entity (i.e. member))

3.5   The examiner has considered the applicant's remarks concerning a system for providing security to a set of interconnected network nodes includes the capability to monitor calls to the system, a group security manager configured to perform security-related acts by interacting with a group database to propagate security-related information to members of the group. Applicant's arguments have thus been fully analyzed and considered but they are not persuasive.

After an additional analysis of the applicant's invention, remarks, and a search of the available prior art, it was determined that the current set of prior art consisting of Yeager (20050086300), Aquilera (20040243827), Yellepeddy (20040111607) and Pabla (20040162871) discloses the applicant's invention including disclosures in Remarks dated January 19, 2007.

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims **20, 34** are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure, which is not enabling.

There is no disclosure for this assertion in the specification and the original claims. The only disclosure for a second member is in the original claims. The original claims state that a first member connects to a second member. There is no indication to designate any particular member is making the certificate renewal request.

This disclosure is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

Claims **26, 40** are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure, which is not enabling.

There is no disclosure for this assertion in the specification and the original claims. The only disclosure for a published token in a graph database is in claim 41. The claim limitation states that security related information is available to the group member. There is no disclosure of the availability of information to each member of the

"secure" group. There is no disclosure that specifically the published token is the one

piece of security related information made available to the each group member.

This disclosure is critical or essential to the practice of the invention, but not

included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527

F.2d 1229, 188 USPQ 356 (CCPA 1976).

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

6.   Claims **20 - 25, 34 - 39** are rejected under 35 U.S.C. 103(a) as being

unpatentable over **Yeager** in view of **Yellepeddy et al.** (US Patent No. **20040111607**).

Regarding Claims 20, 34, Yeager discloses a method for a member in a group within a

graph of interconnected peer nodes to granting privileges, the method comprising:

a) <u>receiving a certificate renewal request</u> to a second member in the group; (see

Yeager paragraph [paragraph [0225], lines 9-13: pipes, communications channel

for data transmission between peer members)

Yeager discloses wherein the capability to renew membership in a peer group, and wherein the renewal is based on authorization from the administrator or based on one or more security policies. (see Yeager paragraph [0558], lines 4-8: membership renewal (i.e. remove, add) capability; paragraph [0225], lines 4-9: security policies utilized) Yeager does not specifically disclose the capability to renew a certificate. However, Yellepeddy discloses:

b) requesting <u>by the second member</u> authorization from an administrator for renewing the certificate. (see Yellepeddy paragraph [0092], lines 1-5: renew certificate)

It would have been obvious to one of ordinary skill in the art to modify Yeager as taught by Yellepaddy to enable the capability to renew a certificate in the processing of authentication information. One of ordinary skill in the art would have been motivated to employ the teachings of Yellepaddy in order to, within a cryptographic authentication environment, optimize verification and validation of the availability of a certificate utilizing an online status check protocol. (see Yellepaddy paragraph [0010], lines 1-4: " ... *would be advantageous to have a method and system that for configuring a set of OCSP responders in order to improve the availability of each of the OCSP responders.* ... ")

Regarding Claims 21, 35, Yeager discloses the method, computer-readable medium of claims 20, 34 wherein the renewal is based on the security policies if the authorization from the administrator is not received. (see Yeager paragraph [0086], lines 1-7:

software; paragraph [0225], lines 4-9: membership based on policies)   Yeager does not

specifically disclose the capability to renew a certificate. However, Yellepeddy

discloses wherein the capability for the renewal of a certificate. (see Yellepeddy

paragraph [0092], lines 1-5: renew certificate)

It would have been obvious to one of ordinary skill in the art to modify Yeager as

taught by Yellepaddy to enable the capability to renew a certificate in the processing of

authentication information.   One of ordinary skill in the art would have been motivated

to employ the teachings of Yellepaddy in order to, within a cryptographic authentication

environment, to optimize verification and validation of the availability of a certificate

utilizing an online status check protocol.   (see Yellepaddy paragraph [0010], lines 1-4)

Regarding Claims 22, 36; Yeager discloses a method, computer-readable medium

having computer-executable instructions to perform acts for a member in a group within

a graph of interconnected peer nodes to renew a certificate granting privileges, the

method comprising:

Yeager discloses the capability to publish content, peer information or records (see

Yeager paragraph [0086], lines 1-7: software, computer readable medium;

paragraph [0223], lines 6-11: publish content, peer information or records), and the

capability to renew membership based on security policies (see Yeager paragraph

[0225], lines 4-9: renew membership).   Yeager does not specifically disclose the

capability to renew a certificate.

However, Yellepeddy discloses:

a) a request to renew the certificate; (see Yellepeddy paragraph [0011], lines 7-11:

   request; paragraph [0225], lines 4-9: renew certificate) and

b) performing renewal. (see Yellepeddy paragraph [0092], lines 1-5: renew

   certificate)

It would have been obvious to one of ordinary skill in the art to modify Yeager

as taught by Yellepaddy to enable the capability to process a request to renew a

certificate in the processing of authentication information. One of ordinary skill in

the art would have been motivated to employ the teachings of Yellepaddy in order

to, within a cryptographic authentication environment, to optimize verification and

validation of the availability of a certificate utilizing an online status check protocol.

(see Yellepaddy paragraph [0010], lines 1-4)

Regarding Claims 23, 37, Yeager discloses the method, computer-readable medium of

claims 22, 36 wherein the renewal is performed online, the method further comprising:

the graph of interconnected nodes (see Yeager paragraph [0029], lines 1-6: multiple

interconnected nodes). Yeager does not specifically disclose the capability to

process a certificate chain, or renew a certificate.

However, Yellepeddy discloses:

a) contacting one or more authorized members with a shorter chain before

   contacting authorized members with a longer chain; (see Yellepeddy paragraph

   [0057], lines 16-19; paragraph [0079], lines 1-5; paragraph [0079], lines 14-22:

   certificate chain processing, chain length (i.e. short or long)) and

b) performing one or more renewal attempts to achieve a chain that is of shorter

length, wherein number of renewal attempts are proportional to length of the

chain; (see Yellepeddy paragraph [0057], lines 16-19; paragraph [0079], lines 1-

5; paragraph [0079], lines 14-22: certificate chain processing, chain length (i.e.

short or long); paragraph [0225], lines 4-9: renew certificate) and

c) if a chain is beyond a predetermined length, performing an offline renewal to

shorten the chain. (see Yellepeddy paragraph [0057], lines 16-19; paragraph

[0079], lines 1-5; paragraph [0079], lines 14-22: certificate chain processing,

chain length (i.e. short or long); paragraph [0225], lines 4-9: renew certificate)

It would have been obvious to one of ordinary skill in the art to modify Yeager

as taught by Yellepaddy to enable the capability to utilize a certificate chain, and

renew a certificate in the processing of authentication information.   One of ordinary

skill in the art would have been motivated to employ the teachings of Yellepaddy in

order to, within a cryptographic authentication environment, to optimize verification

and validation of the availability of a certificate utilizing an online status check

protocol. (see Yellepaddy paragraph [0010], lines 1-4)

Regarding Claims 24, 38, Yeager discloses the method, computer-readable medium of

claims 22, 36. (see Yeager paragraph [0086], lines 1-7: software, computer readable

medium)   Yeager does not specifically disclose the capability to process a certificate

chain, or renew a certificate.   However, Yellepeddy disclose wherein the renewal is

repeated if a shorter chain can be achieved. (see Yellepeddy paragraph [0057], lines

16-19; paragraph [0079], lines 1-5; paragraph [0079], lines 14-22: certificate chain

processing, chain length (i.e. short or long); paragraph [0225], lines 4-9: renew

certificate)

It would have been obvious to one of ordinary skill in the art to modify Yeager as

taught by Yellepaddy to enable the capability to utilize a certificate chain, and renew a

certificate in the processing of authentication information. One of ordinary skill in the

art would have been motivated to employ the teachings of Yellepaddy in order to, within

a cryptographic authentication environment, to optimize verification and validation of the

availability of a certificate utilizing an online status check protocol. (see Yellepaddy

paragraph [0010], lines 1-4)

Regarding Claims 25, 39, Yeager discloses the method, computer-readable medium of

claims 22, 36 wherein more than one authorized member is the group is active, each

authorized member in the group enabled to process the request. (see Yeager

paragraph [0086], lines 1-7: software, computer readable medium; paragraph [0558],

lines 4-8: more than one member authorized to process requests) Yeager does not

specifically disclose the capability to process a certificate chain, or renew a certificate.

However, Yellepeddy disclose wherein enabled to process the renewal request,

providing each authorized member in the group with a random back-off <u>period</u> prior to

attempting to process the renewal request, the random back-off proportional to a length

of the chain of the authorized member. (see Yellepeddy paragraph [0057], lines 16-19;

paragraph [0079], lines 1-5; paragraph [0079], lines 14-22: certificate chain processing,

chain length (i.e. short or long); paragraph [0092], lines 1-5: renewal of certificate)

It would have been obvious to one of ordinary skill in the art to modify Yeager as

taught by Yellepaddy to enable the capability to utilize a certificate chain, and renew a

certificate in the processing of authentication information. One of ordinary skill in the

art would have been motivated to employ the teachings of Yellepaddy in order to, within

a cryptographic authentication environment, to optimize verification and validation of the

availability of a certificate utilizing an online status check protocol. (see Yellepaddy

paragraph [0010], lines 1-4)

7.   Claims **32, 33, 46, 47** are rejected under 35 U.S.C. 103(a) as being unpatentable

over **Yeager** in view of **Aguilera et al.** (US Patent No. **20040243827**).

Regarding Claims 32, 46, Yeager discloses a method, computer-readable medium

having computer-executable instructions to perform acts for revoking one or more

members of a group of interconnected nodes within a graph, the method comprising:

a group of interconnected nodes or a graph (see Yeager paragraph [0029], lines 1-6:

grouping of interconnected nodes), the usage of software for prior art

implementation, and the usage of one or more serial numbers, the one or more

serial numbers identifying the one or more members of the group. (see Yeager

paragraph [0086], lines 1-7: software, computer-readable medium; paragraph

[0173], lines 1-6: unique identification (i.e. UUID) or serial numbers as identification

information)   Yeager does not specifically disclose the usage or update of a

revocation bitmap.

However, Aguilera discloses:

a) identifying one or more bits in a revocation bit map, the bits identifying the one or

more members of the group; (see Aguilera paragraph [0031], lines 1-5: bitmap

representation for revocation list) and

b) altering the one or more bits in the revocation bit map, the altering revoking the

one or more members of the group. (see Aguilera paragraph [0031], lines 1-5:

bitmap representation for revocation list; paragraph [0027], lines 17-20: update

revocation list, in order to revoke an entity (i.e. member))

It would have been obvious to one of ordinary skill in the art to modify Yeager

as taught by Aguilera to enable a bitmap representation for revocation list

information. One of ordinary skill in the art would have been motivated to employ

the teachings of Aguilera in order to, within a cryptographic authentication peer-to-

peer environment, enable the capability to utilize a small amount storage for the

bitmap revocation information. (see Aquilera paragraph [0031], lines 1-5: " ... *It is*

worth noting that the group list and the revocation list can be stored as a bitmap or

as explicit lists. The bitmap representation has the advantage that it is compact, but

it requires capability identifiers to be small and thus limits the number of outstanding

capabilities. ... ")

Regarding Claims 33, 47, Yeager discloses the method, computer-readable medium of

claims 32, 46. (see Yeager paragraph [0086], lines 1-7: software, computer-readable

medium)   Yeager does not specifically disclose the usage or update of a revocation

bitmap.   However, Aguilera discloses wherein the revocation bitmap is scalable.   (see

Aquilera paragraph [0031], lines 1-5: bitmap representation for revocation list;

paragraph [0033], lines 1-3: scalable, adjustable size for bitmap representation)

It would have been obvious to one of ordinary skill in the art to modify Yeager as

taught by Aguilera to enable a bitmap representation for revocation list information.

One of ordinary skill in the art would have been motivated to employ the teachings of

Aguilera in order to, within a cryptographic authentication peer-to-peer environment,

enable the capability to utilize a small amount storage for the bitmap revocation

information. (see Aquilera paragraph [0031], lines 1-5)

Claim Rejections - 35 USC § 102

8.   The following is a quotation of 35 U.S.C. 102 which forms the basis for all

obviousness rejections set forth in this Office action:

> (e) the invention was described in (1) an application for patent, published under section 122(b), by
> another filed in the United States before the invention by the applicant for patent or (2) a patent
> granted on an application for patent by another filed in the United States before the invention by the
> applicant for patent, except that an international application filed under the treaty defined in section
> 351(a) shall have the effects for purposes of this subsection of an application filed in the United States
> only if the international application designated the United States and was published under Article 21(2)
> of such treaty in the English language.

9.   Claims **26, 28 - 31, 40, 42 - 45** are rejected under 35 U.S.C. 102(e) as being

anticipated by **Yeager et al.** (US PGPUB No. **20050086300**).

Regarding Claims 26, 40, Yeager discloses a method, computer-readable medium

having computer-executable instructions to perform acts for ensuring that a publisher of

information in a record to a secure group in a graph of interconnected nodes has

authority to publish to the secure group, the method comprising:

    a) creating a token (see Yeager paragraph [0577], lines 7-11: tokens, credentials

        utilized for security) for the publisher, the token containing information located in

        a role assigned to the publisher, the role identifying privileges of the publisher;

        (see Yeager paragraph [0578], lines 4-6: role assignments, privileges assigned)

        and

    b) matching the token (see Yeager paragraph [0577], lines 7-11: tokens, credentials

        utilized for security) against a security descriptor for the record to be published,

        the security descriptor providing a list of rights associated with each role, <u>wherein</u>

        <u>the token is published in a graph database, the graph database providing</u>

        <u>security related information including the published token to each member of the</u>

        <u>secure group.</u>. (see Yeager paragraph [0578], lines 4-6: privileges, access

        control list linked to role; paragraph [0256], lines 1-3: storage, database

        containing security information))

Regarding Claims 28, 42, Yeager discloses the method, computer-readable medium of

claims <u>26</u>, 40 wherein the graph database enables deferred record validation by

enabling a group member to defer until required security information is available to the

group member. (see Yeager paragraph [0256], lines 1-3: storage, database containing

peer information)

Regarding Claims 29, 43, Yeager discloses a method, computer-readable medium

having computer-executable instructions to perform acts for revoking a member of a

group of interconnected nodes within a graph, the method comprising:

a) publishing a revocation record to the group, the revocation record identifying the

   member; (see Yeager paragraph [0086], lines 1-6: software, computer readable

   medium; paragraph [0223], lines 6-11: publish content, peer information or

   records: publish content, peer information; paragraph [0558], lines 4-8: remove or

   revoke membership) and

b) revoking any records published by the member according to the revocation

   record. (see Yeager paragraph [0223], lines 6-11: publish content, peer

   information or records; paragraph [0558], lines 4-8: remove or revoke

   membership)

Regarding Claims 30, 44, Yeager discloses the method, computer-readable medium of

claims 29, 43 wherein the revocation record is published with validation time sufficient to

ensure that a current certificate of the revoked group member expires before the

revocation. (see Yeager paragraph [0591], lines 7-10: expiration time period for

credentials; paragraph [0558], lines 4-8: remove or revoke membership; paragraph

[0135], lines 1-3; paragraph [0135], lines 5-11: certificate utilization)

Regarding Claims 31, 45, Yeager discloses the method, computer-readable medium of

claim 29 wherein if the member to be revoked is an administrator, the administrator

privileges are first deprecated prior to the publishing the revocation record. (see Yeager

paragraph [0086], lines 1-6: software, computer readable medium; paragraph [0558],

lines 4-8: some members, managers, administrators to remove membership in peer

group)

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the ·
examiner should be directed to Carlton V. Johnson whose telephone number is 571-
270-1032. The examiner can normally be reached on Monday thru Friday , 8:00 -
5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Nasser Moazzami can be reached on 571-272-4195. The fax phone
number for the organization where this application or proceeding is assigned is 571-
273-8300.

Information regarding the status of an application may be obtained from the
Patent Application Information Retrieval (PAIR) system. Status information for
published applications may be obtained from either Private PAIR or Public PAIR.
Status information for unpublished applications is available through Private PAIR only.
For more information about the PAIR system, see http://pair-direct.uspto.gov. Should
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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a
USPTO Customer Service Representative or access to the automated information
system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NASSER MOAZZAMI   Carlton V. Johnson
SUPERVISORY PATENT EXAMINER   Examiner
TECHNOLOGY CENTER 2100   Art Unit 2136

CVJ
March 28, 2007